CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
TENTATIVE
ADDENDUM NO. 3
TO
ORDER NO. 2001-08
NPDES NO. CA0107611

WASTE DISCHARGE REQUIREMENTS FOR THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY ORANGE COUNTY

DISCHARGE TO THE PACIFIC OCEAN THROUGH THE ALISO CREEK OCEAN OUTFALL

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On February 21, 2001, the Regional Board adopted Order No. 2001-08, NPDES Permit No. CA0107611, Waste Discharge Requirements for the Aliso Water Management Agency (AWMA), Orange County, Discharge to the Pacific Ocean through the Aliso Water Management Agency Ocean Outfall. Order No. 2001-08 established requirements for the discharge of up to 27.0 million gallons per day (mgd) of treated wastewater to the Pacific Ocean via the AWMA Ocean Outfall.

2. On October 10, 2001, the Regional Board adopted Addendum No. 1 to Order No. 2001-08, which deleted the Aliso Water Management Agency as the agency responsible for compliance with Order No. 2001-08 and replaced it with the South Orange County Wastewater Authority (SOCWA). In addition, the Aliso Water Management Agency Ocean Outfall was renamed to the South Orange County Wastewater Authority Aliso Creek Ocean Outfall (ACOO).

3. On February 13, 2002, the Regional Board adopted Addendum No. 2 to Order No. 2001-08, which changed the effluent limitations for TCDD equivalents.

4. By letter dated June 10, 2004, the SOCWA submitted an application requesting an amendment to Order No. 2001-08 to accommodate the discharge of up to 1.5 mgd of treated groundwater from a new facility to be known as the Irvine Desalter Project (IDP) operated by the Irvine Ranch Water District (IRWD).

5. The IDP, a facility to treat groundwater, is composed of two separate components: a non-potable water and potable water system.

a. Non-Potable Water System – The non-potable system will accept flow from wells either within or near a plume of groundwater contaminated with volatile organic compounds (VOC), primarily trichloroethylene (TCE) on or near the former Marine Corps Air Station (MCAS) El Toro in Irvine, California. The following is a description of the non-potable system:

   1) Approximately 400 gallons per minute (gpm) or 0.58 mgd of groundwater from extraction wells within the Department of the Navy's shallow groundwater unit (SGU) will be treated using air stripping. The SGU treatment system is located on the former site of MCAS El Toro. The primary method of disposal will be groundwater injection within the Santa Ana Basin (Region 8). However, if the injection well is out of service or flow rate from SGU wells exceed the capacity of the injection well, the treated water will be directed to disposal through the ACOO.

   2) Approximately 1,000 gpm (1.44 mgd) of groundwater from IRWD well ET-1 will be treated using air stripping and distributed by the IRWD for irrigation and other non-potable uses within the Santa Ana Basin (Region 8). Flow from well ET-1 will not be discharged through the ACOO.

   3) Approximately 1,900 gpm (2.74 mgd) of groundwater from IRWD wells 78 and 113 (also known as ET-2) will be distributed untreated by the IRWD for irrigation and other non-potable uses within the Santa Ana Basin (Region 8). Flow from wells 78 and 113 will not be discharged through the ACOO.

b. Potable Water System – Approximately 3,200 gpm (4.61 mgd) of groundwater from IRWD wells located upgradient of the contaminated groundwater plume will be treated using reverse osmosis (RO) to remove total dissolved solids, nitrates, and selenium. The RO treatment system is located at the intersection of Jeffrey Road and Irvine Center Drive in Irvine, California. The treated water will be distributed by IRWD as potable water. Approximately 457 gpm (0.66 mgd) of RO reject, or brine, will be directed for disposal through the ACOO.

6. The combined SGU effluent and RO brine flow will not exceed 1.5 mgd (1,042 gpm). This flow will be routed through the Regional Brine Line to a connection to the SOCWA Effluent Transmission Main just downstream of the IRWD Los Alisos Wastewater Treatment Plant. From there, the water will commingle with the treated effluent from various other wastewater treatment facilities and eventually discharge directly to the Pacific Ocean through the ACOO.

7. This addendum does not change prohibition A.11 of Order No. 2001-008 which prohibits the discharge through the ACOO in excess of an average dry weather flow of 27 mgd. In calendar year 2003, the average dry weather flow through the ACOO was 15 mgd.

8. Neither the SGU effluent nor RO brine are expected to contain concentrations of pollutants listed in the California Ocean Plan in excess of the effluent limitations in Order No. 2001-008.

9. The California Ocean Plan allows the use of a minimum probable initial dilution factor, Dm (expressed as parts seawater per part wastewater), for calculation of effluent limitations for the Table B priority pollutant water quality objectives. Order No. 2001-008 allows a minimum initial dilution factor (Dm) of 260. The Regional Board completed a revised modeling assessment of the ACOO with a discharge consisting of 26 mgd of secondary treated wastewater and 1 mgd of RO brine. It was determined that the addition of the RO brine will not have a significant impact on the Dm.

10. Because Order No. 2001-08, as originally issued, was unclear, this addendum clarifies that the effluent from each wastewater treatment facility must meet the technology-based effluent limitations for municipal dischargers set forth in 40 CFR Part 133 for TSS, $CBOD_5$, and pH.

11. The discharge is not expected to cause significant pollution, contamination, or nuisance; adversely impact human health or the environment; cause or contribute to violation of applicable water quality objectives of the waters of the state and waters of the United States, including the Pacific Ocean.

12. The issuance of waste discharge requirements for this discharge is exempt from the requirement of preparation of environmental documents under the California Environmental Quality Act (CEQA) [Public Resources Code, Division 13, Chapter 3, Section 21000 *et seq*.] in accordance with Section 13389 of the California Water Code.

13. The Orange County Water District, as lead agency for the purpose of the CEQA, has certified an Environmental Impact Report on the IDP and determined that the project will have no significant impacts on the environment.

14. The Regional Board has notified SOCWA and all known interested parties of its intent to modify Order No. 2001-08.

15. The Regional Board, at a public meeting on December 8, 2004 has heard and considered all comments pertaining to the modification of Order No. 2001-08.

IT IS HEREBY ORDERED THAT Order No. 2001-08 be modified as follows:

1. **Section A. Prohibitions** – The following section shall be added:

   "13. The combined SGU effluent and RO brine flow from the IDP shall not exceed 1.5 mgd."

2. **Section B.1. Discharge Specifications** – The text of the section shall be replaced with the following:

   "The following effluent limitations, calculated using an initial dilution factor of 260, apply to the combined discharge to the ACOO from the SOCWA member agency sewage treatment plants and the IDP. In addition, when discharging to the ACOO, the effluent from the SGU shall independently meet the effluent limitations except for $CBOD_5$, BOD_5, suspended solids, oil and grease, settleable solids, and chlorine residual:"

3. **Section B.3. Discharge Specifications** – The text of the section shall be replaced with the following:

   "The 30-day average percent removal of $CBOD_5$ and the 30-day average percent removal of TSS at each sewage treatment plant shall not be less than 85 percent. In addition, the effluent from each sewage treatment plant shall meet the effluent concentration limitations for $CBOD_5$, TSS, and pH set forth in Section B.1.a."

4. **Order No. 2001-08 Endnote No. 3** – The text of the footnote shall be replaced with the following:

   "Effluent limitations were determined using the procedures outlined in the 1997 Ocean Plan, and an initial dilution of 260. Mass emission rate (MER) limitations were determined using procedures outlined in the Ocean Plan, Equation 2, and a flowrate of 27.0 MGD."

Monitoring and Reporting Program No. 2001-08

5. **Section C.2. Influent Monitoring** – The following text shall be added after the last sentence of the section:

   "Collection of influent samples from the IDP is not required."

6. **Section D.4. Effluent Monitoring** – The first sentence of the section shall be replaced with the following:

   "The following shall constitute the effluent monitoring program subject to the exceptions in Sections D.5 and D.6:

7. **Section D. Effluent Monitoring** – The following sections shall be added:

   "5. The effluent of the IDP need not be sampled for $CBOD_5$, BOD_5, suspended solids, oil and grease, settleable solids, or chlorine residual."

"6. The effluent of the SGU shall be sampled independently for trichloroethylene and carbon tetrachloride once per calendar month if discharged to the ACOO during that month and for the full list of parameters except for $CBOD_5$, BOD_5, suspended solids, oil and grease, settleable solids, and chlorine residual once per calendar year if discharged to the ACOO during that year. The monthly and annual samples shall be obtained during the first discharge episode of the month or year."

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, San Diego Region, on December 8, 2004.

TENTATIVE
JOHN H. ROBERTUS
Executive Officer